In the claims:

Claims 1-46 (canceled)

47(previously presented). A computer implemented method of dynamically determining a multimedia streaming data rate between multiple points in a communications network in which one or more points send data, servers, and one or more points receive data, clients, the method comprising the steps of:

in the server, estimating an amount of data buffered in the network, $BYTE_{BUFFERED}$, at a time a feedback report, FR, is received from the client; and

in the server, calculating a streaming data rate set point based on the estimated $BYTE_{BUFFERED}$ and other information from the server.

48(previously presented). The method of claim 47, wherein the step of estimating $BYTE_{BUFFERED}$ comprises:

determining the difference between an accumulative number of bytes sent from the server and an accumulative number of bytes received by the client; adjusting the determined difference by an uplink delay compensation value; and adjusting the determined difference by an estimated amount of accumulative packets lost.

49(previously presented). The method of claim 48, wherein the uplink delay compensation value is computed as the amount of data sent out by the server during a most previous uplink delay period.

50(previously presented). The method of claim 48, wherein the packet loss compensation value is computed as the accumulative amount of data bytes lost from the beginning of the streaming.

51(previously presented). The method of claim 48, wherein the packet loss compensation value is computed from the number of packets lost reported in the FR and either a short term or long

term average packet size.

52(previously presented). The method of claim 47, wherein the other information includes any combination of a pre-adjustment data rate set point, a target byte count, $BYTE_{TARGET}$, a most recent estimated received data rate, a previous server streaming data rate, an excess send rate, a required send rate change and a tuning parameter.

53(previously presented). The method of claim 52, wherein the step of calculating the streaming data rate set point includes: calculating the streaming data rate set point as the most recent estimated received data rate plus the required send rate change multiplied by the tuning parameter.

54(previously presented). The method of claim 52, wherein the step of calculating the streaming data rate set point includes: calculating the streaming data rate set point as the pre-adjustment data rate set point minus the excess send rate plus the required send rate change multiplied by the tuning parameter.

55(previously presented). The method of claim 52, wherein the step of calculating the streaming data rate set point further includes imposing an upper and lower bound on the data rate set point.

56(previously presented). The method of claim 55, wherein the upper and lower bounds imposed on the data rate set point are determined by the server based on a multimedia source encoding range or capabilities of the communications network.

57(previously presented). The method of claim 56, wherein the upper and lower bounds imposed on the data rate set point are determined on a per stream basis by the server.

58(previously presented). The method of claim 52, wherein the received data rate is calculated as

the bytes received within a period between receiving a last and current FR divided by a FR report interval.

59(previously presented). The method of claim 52, wherein the required send rate change is calculated as the difference between $BYTE_{TARGET}$ and $BYTE_{BUFFERED}$ divided by a FR report interval.

60(previously presented). The method of claim 47 wherein the method further comprises steps of: gradually changing the data rate set point by the server if a next FR is not received from the client at an expected time; and if the server does not receive FR over an extended period of time due to the presence of a long transmission gap, then pausing the streaming until either a new FR is received or eventually a timeout is reached, and when streaming is first resumed after pausing, the streaming data rate set point is calculated as a most recent estimated receive data rate plus a required send rate change multiplied by a tuning parameter.

61(previously presented). The method of claim 60, wherein the step of gradually changing the data rate set point includes gradually increasing the data rate set point.

62(previously presented). The method of claim 60, wherein the step of gradually changing the data rate set point includes gradually decreasing the data rate set point.

63(previously presented). The method of claim 62, wherein the step of gradually decreasing the data rate set point includes: calculating a decreased data rate set point as an immediately prior data rate set point minus a scaled difference between the prior data rate set point and a minimum data rate set point.

64(previously presented). The method of claim 63, wherein the difference between the prior data

rate set point and the minimum data rate set point is scaled by a rate delay parameter which is an adjustable percentage value defined by the server.

65(previously presented). A computer implemented method for dynamically adjusting a data transmission rate between two points in a communications network, the method comprising steps of:

estimating in a server, an amount of data buffered in the network, $BYTE_{BUFFERED}$, at a time a feedback report, FR, is received from a client; calculating a data rate set point based on the estimated $BYTE_{BUFFERED}$ and other information from a server; and

imposing an upper and lower bound on the data rate set point, to establish minimum and maximum data rate set points, respectively.

66(previously presented). A computer implemented method for dynamically adjusting a multimedia data rate between two points in a communications network, the method comprising steps of:

estimating in a server, an amount of data buffered in the network, $BYTE_{BUFFERED}$, at a time a feedback report, FR, is received from the client; calculating a data rate set point based on the estimated $BYTE_{BUFFERED}$ and other information from the server; and

imposing an upper and lower bound on the data rate set point, to establish minimum and maximum data rate set points, respectively; and gradually changing the data rate set point by the server if a next FR has not been received from the client within a specified time period.